

IN THE CLAIMS:

1. (Original) A clamp for holding and transporting an electrophoresis gel slab, said clamp comprising:

a first jaw having an operating end and a gripping end; and

a second jaw coupled to and being movable with respect to said first jaw, said first jaw having an operating end and gripping end, said gripping ends of said first and second jaws having a longitudinal dimension to grip and suspending a gel slab without damaging the gel slab, and said gripping end of said second jaw being biased toward said gripping end of said first jaw for gripping a gel slab.

2. (Original) The clamp of claim 1, wherein said clamp comprises at least one magnet for biasing said gripping ends of said first and second jaws together.

3. (Original) The clamp of claim 1, wherein said gripping end of said first jaw includes a first magnet and said gripping end of said second jaw includes a second magnet for biasing said gripping ends together.

4. (Original) The clamp of claim 3, wherein said first and second magnets are magnetic plastic strips.

5. (Original) The clamp of claim 1, wherein said second jaw is pivotable with respect to said first jaw to open and close said gripping ends of said jaws.

6. (Original) The clamp of claim 5, wherein said first jaw includes a fulcrum for pivoting said second jaw with respect to said first jaw.

7. (Original) The clamp of claim 6, wherein said fulcrum is positioned between said gripping end and said operating end of said first jaw and extends substantially parallel to said gripping end.

8. (Original) The clamp of claim 1, wherein said gripping ends of said first and second jaws have a slip resistant surface for gripping said gel slab.

Q1 9. (Original) The clamp of claim 1, wherein said first jaw has a height defined by a distance between said operating end and said gripping end, and said second jaw has a height defined by a distance between said operating end and gripping end, and wherein said height of said first jaw is greater than said height of said second jaw.

10. (Original) The clamp of claim 1, wherein said operating end of said first jaw includes at least one opening dimensioned to receive a carrier assembly for manipulating said clamp.

11. (Original) The clamp of claim 1, wherein said operating end of said first jaw has a longitudinal length greater than a longitudinal length of said second jaw.

12. (Original) The clamp of claim 11, wherein said operating end of said first jaw has a shoulder at opposite ends, each said shoulder being dimensioned for engaging a support to suspend a gel in a substantially vertical direction.

13. (Original) The clamp of claim 1, wherein said first and second jaws are formed from a substantially planar sheet material.

14. (Original) The clamp of claim 13, wherein said sheet material is selected from the group consisting of metal, glass and plastic.

15. (Original) The clamp of claim 1, wherein said clamp further comprises a hinge coupled to said first and second jaws, wherein said second jaw is pivotable with respect to said first jaw.

RI 16. (Original) The clamp of claim 1, wherein said gripping end of said first and second jaws include a resilient cushion member.

17. (Original) The clamp of claim 15, wherein said resilient cushion member has a slip-resistant surface.

18. (Original) The clamp of claim 17, wherein said cushion member is a resilient polymeric foam.

19. (Original) The clamp of claim 1, wherein said gripping ends of said first and second jaws include a plurality of particles forming a textured gripping surface.

20. (Original) A method of manipulating an electrophoresis gel slab, said method comprising the steps of:

providing a clamp having a first jaw with an operating end and a gripping end, and a second jaw with an operating end and a gripping end, said gripping ends being biased toward each other;

providing a gel slab having a length, a width and a side edge;

positioning said side edge between said gripping ends of said jaws and biasing said gripping ends toward said gel slab with sufficient pressure to grip said gel slab; and

lifting said clamp and vertically suspending said gel slab, said gripping ends of said jaws being biased together under sufficient force to grip said side edge of said gel slab substantially without tearing said gel slab.

21. (Original) The method of claim 20, comprising the step of moving said carrier to a position above a gel staining tank containing a staining liquid, and lowering said gel slab into said staining liquid for sufficient time to stain said gel.

22. (Original) The method of claim 20, wherein said first and second jaws of said clamp include a magnet for biasing said gripping ends together.

23. (Original) The method of claim 20, wherein said magnets are coupled to said gripping ends of said first and second jaws.

24. (Original) The method of claim 20, wherein said second jaw pivots about an axis between an open position and a gripping position, said method comprising retaining said second jaw in said open position while positioning said side edge of said gel slab between said gripping ends, and thereafter releasing said second jaw to grip said gel slab.

Claims 25-48 (Cancel without prejudice)

49, (Original) A tank assembly for treating an electrophoresis gel with a treating liquid, said tank assembly comprising:

a treatment tank having a side wall and being dimensioned to contain a liquid bath;

an agitator, said agitator including a movable agitator member positioned in said tank and being movable toward said side wall; and

a drive member coupled to said agitator for moving said agitator and agitating the liquid contained in said tank.

50. (Original) The assembly of claim 49, wherein said agitator member reciprocates along a plane substantially perpendicular to said side wall to agitate said liquid.

51. (Original) The assembly of claim 49, wherein said agitator member is a planar member having a dimension complementing a dimension of the electrophoresis gel.

Claims 52-76 (Cancel without prejudice)

77. (New) A method of staining an electrophoresis gel slab, said method comprising the steps of:

positioning an edge of said electrophoresis gel slab between a first jaw and a second jaw of a gel clamp, each of said first jaw and said second jaw having a gripping end, where said gripping ends are biased together,

closing said gripping ends of first and second jaws onto said edge of said electrophoresis gel with sufficient pressure to grip said electrophoresis gel slab without damaging said gel,

lifting said gel clamp and vertically suspending said gel slab from said gel clamp, and

positioning said gel slab in a staining vessel containing a gel staining liquid and staining said gel slab.

78. (New) The method of claim 77, wherein said first jaw is pivotal with respect to said second jaw.

79. (New) The method of claim 78, wherein said gel clamp includes a biasing member and said method comprises biasing said first and second jaws together.

80. (New) The method of claim 79, wherein said biasing member comprises a magnet.

81. (New) The method of claim 79, wherein said biasing member comprises a first magnet on said first jaw and a second magnet on said second jaw.

82. (New) The method of claim 77, further comprising the step of continuously moving said gels in said staining vessel during said staining step to agitate said staining liquid.

83. (New) The method of claim 77, further comprising the step of continuously reciprocating said gels in a substantially linear direction during said staining to agitate said staining liquid.

84. (New) The method of claim 83, wherein said staining vessel includes an agitating motor and said method comprises actuating said drive motor to reciprocate said gel slab in a substantially linear direction to agitate said staining liquid while staining said gel.

85. (New) The method of claim 77, comprising positioning a plurality of said gel slabs in said staining vessel in a parallel spaced-apart relationship and continuously reciprocating said gel slabs in a linear direction to agitate said staining liquid.

86. (New) A method of staining a plurality of electrophoresis gel slabs, said method comprising:

placing a plurality of said electrophoresis gel slabs in a tank containing a staining solution, said electrophoresis gel slabs being spaced-apart and oriented substantially parallel to each other, and

reciprocating said electrophoresis gels in a substantially linear direction within said tank to agitate said staining solution and simultaneously staining said electrophoresis gels.

87. (New) The method of claim 86, wherein each of said electrophoresis gels include a support, and said method comprising positioning each of said respective supports in said tank and reciprocating said supports.

88. (New) The method of claim 87, wherein said tank includes a reciprocating member and a motor operatively connected to said reciprocating member, each of said supports being retained on said reciprocating member, and where said method comprising activating said motor and reciprocating said reciprocating member to reciprocate each of said gels and agitate said staining solution.
